QUART
Quality Assurance in Radiological Technologies

MRI QA Phantom*

QA System for MRI Image Quality

* Patent pending

QA System for MRI Image Quality

The Quality Assurance System for Magnetic Resonance Imaging has been deve- loped for time-efficient MRI performance monitoring. It was the first-to-market product to meet the latest IEC standard requirement.

The combination of a QA phantom (patent pending) and image scoring software in a complete set introduces a new approach for MRI QA. Tests can be carried out in
a very efficient and time-saving manner. The acquired test images are loaded into the software where the test procedure is concluded using only a few clicks.

Ongoing image QA tests assure consistent image quality over a long period of time. The test results will reveal deterioration in the system performance, thus, identifying potential malfunctions which may be a risk to the integrety of the ima- ging system and consequently a risk to patient safety and health.

The German-made solution featuring a patented phantom design is the first in the market to comply with the latest European standard:

IEC 62464-1 (2018) Magnetic resonance equipment for medical imaging - Part 1: Determination of essential image quality parameters

Patented Phantom Design

- Compact and lightweight: Diameter 160 mm / Height 140 mm / Weight 2.5 kg when filled
- Optimized for the application in head coils of all common manufacturers
- Allows scans for all three orientations inside many head coils
- Assessment of image quality using six essential IQ parameters
- MR coil optimization holding device for the phantom available to avoid time-consuming positioning and alignment (available for various brands and models)
- Quick test completion: only 10 minutes of scan time required

Evaluation Software

- Clear and intuitive user interface
- Use of quantitative IQ parameters for long term comparison and trend analysis
- Quick evaluation of parameters by automatized evaluation process
- Automated reporting for all tests: ACCEPTANCE & CONSTANCY TESTS
- One software tool for all MR scanners in one facility

Parameters

_ Signal-to-noise ratio
_ Uniformity
_ Slice thickness in 2-D scanning
_ 2-D Geometric distortion
_ Spatial resolution (1 mm)
_ Ghosting artefacts

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